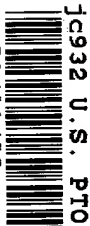09-29-00   A

UTILITY PATENT APPLICATION TRANSMITTAL

22193

PATENT TRADEMARK OFFICE

Address to: **Box PATENT APPLICATION** **Commissioner for Patents** **United States Patent & Trademark Office** **Washington, DC 20231**	*Attorney Docket No.*	1724(USW 0605 PUS)
	Inventor(s) or Application Identifier: Warren E. Langdon	

1. This application entitled <u>PORTABLE WIRELESS PLAYER AND ASSOCIATED METHOD</u> is:

    a.   ✓   A new application under 37 C.F.R. §1.53(b).

    b.   ___   A ___ continuation ___ divisional or ___ continuation-in-part application under 37 C.F.R. § 1.53(b) of prior application Serial No. ___/_____ filed on _____, entitled _____.

Application elements and other attached papers:

2.   ✓   Specification (incl. Claims and Abstract)   [Total Pages 15]

3.   ✓   Drawings (✓ informal ___ formal)   [Total Sheets 2]

4.   ✓   Oath or Declaration

    a.   ✓   Newly-executed

    b.   ___   Copy from a prior application (37 C.F.R. § 1.63(d))

5.   ___   Incorporation By Reference: The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Item 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

6.   ___   This application is filed by fewer than all the inventors named in the prior application, 37 C.F.R. § 1.53(d)(4).

    a.   ___   ***DELETE*** the following inventor(s) named in the prior nonprovisional application:

    _____

    _____

    b.   ___   The inventor(s) to be deleted are set forth on a separate sheet attached hereto.

CERTIFICATION UNDER 37 C.F.R. § 1.10

I hereby certify that this UTILITY PATENT APPLICATION TRANSMITTAL and the documents referred to as attached therein are being deposited on the below date with the United States Postal Service in an envelope as "Express Mail Post Office to Addressee" addressed to: Box Patent Application, Commissioner for Patents, United States Patent and Trademark Office, Washington, D.C. 20231.

Express Mail Label No. ___EL481737616US___

Date of Deposit: ___September 28, 2000___

DONNA L. SCHULTE
(Type or print name of person mailing paper)

Donna L. Schulte
(Signature of person mailing paper)

7. Preliminary Amendment:

a. ___ A Preliminary Amendment is attached.

b. ___ Cancel in this application original claims _____ of the prior application before calculating the filing fee.

c. ___ Please amend the specification by inserting before the first line the sentence:

"This is a

___ continuation

___ divisional

of copending application(s)

___ Serial number ___ /_____ filed on _____."

d. ___ A Petition to Suspend Prosecution For The Time Necessary to File An Amendment (New Application Filed Concurrently) is attached.

8. Small entity status:

a. ___ A small entity statement is attached.

b. ___ A small entity statement was filed in the prior nonprovisional application and such status is still proper and desired.

c. ___ Is no longer desired.

9. Fee Calculation:

FOR	NUMBER FILED		NUMBER EXTRA	RATE	CALCULATIONS
TOTAL CLAIMS (37 C.F.R. § 1.16(c))	20	-20 =	– – –	X 18.00	– – –
INDEPENDENT CLAIMS (37 C.F.R. § 1 16(b))	4	-3 =	1	X 78.00	78.00
MULTIPLE DEPENDENT CLAIMS (if applicable) (37 C.F.R. §1.16(d))				260.00	– – –
				BASIC FEE (37 C.F.R. § 1.16(a))	690.00
			Total of above Calculations =		768.00
Reduction by 50% for filing by small entity (Note 37 C.F.R. §§ 1.9, 1.27, 1.28)					
			Assignment Recordal Fee	40.00	40.00
				TOTAL =	808.00

10. ___ A check in the amount of $_____ is enclosed.

11. _x_ The Commissioner is hereby authorized to credit overpayments or charge the following fees (or any deficiency therein) to Qwest Communications International Inc. Deposit Account No. __21-0456__:

a. _x_ Fees required under 37 C.F.R. § 1.16.

b. _x_ Fees required under 37 C.F.R. § 1.17.

12. Maintenance of Copendency of Prior Application

   ___ A request for extension of time and the appropriate fee have been filed in the pending **prior** application (or are being filed in the prior application concurrently herewith) to extend the period for response until _____.

13. ✓ An Information Disclosure Statement (IDS) is attached, along with the following indicated attachments thereto:

   a. ✓ Form PTO/SB/08 (____1____ sheet)

   b. ✓ Copies of references cited

14. ___ Certified copy of priority document(s)

15. _x_ Return Receipt Postcard

16. ___ Other: _____

17. _x_ An Assignment of the invention to <u>Qwest Communications International Inc.</u>

   a. _x_ is attached.

   b. ___ was recorded on _____ at Reel _____, Frame _____.

18. The power of attorney in the prior application is to:

   _____

Name of Attorney of Record   Reg. No.

   ___ The power appears in the original papers in the prior application.

   ___ The power does not appear in the original papers, but was filed on _____.

   ___ A new power has been executed and is attached.

19. Correspondence Address: Please address all future communications to:

   _____,

22193

PATENT TRADEMARK OFFICE

Telephone: 877-879-4747 or 303-672-2700; Fax: 303-296-2815

Respectfully submitted,

Date September 28, 2000

Name: Jeremy J. Curcuri
Registration No.: 42,454

   ✓ Attorney or agent of record
   ___ Filed under Rule 34(a)

PORTABLE WIRELESS PLAYER AND ASSOCIATED METHOD

TECHNICAL FIELD

The present invention relates to a method of providing programming to a portable wireless player.

5   ## BACKGROUND ART

The use of wireless technology has become widespread. Some existing cellular phones include a plethora of features, with some of these phones having microbrowsers and messaging capabilities. Today's cellular phone is not just an ordinary phone anymore, but is packed with features. Similarly, sophisticated

10   wireless personal digital assistants are also available. In addition to traditional calendar and planning software, these personal digital assistants include wireless capabilities to allow messaging, such as e-mail, as well as a form of limited web access.

Although many existing wireless devices including cellular phones and

15   personal digital assistants have been commercially successful, many of these devices have many advanced features and the consumer is forced to pay a premium for the product even though many of the features may go unused. Because the wireless revolution is in its infancy, there is a need for improved wireless products. In addition, there is a need for a wireless device that provides the functionality

20   demanded by a consumer while providing enough simplicity to keep the product cost low.

DISCLOSURE OF INVENTION

It is, therefore, an object of the present invention to provide a method of providing programming to a portable wireless player.

-1-

In carrying out the above object and other objects and features of the present invention, a method of providing programming to a portable wireless music player having a memory is provided. The player is operative to transmit and receive information over a wireless link to a wireless service network. The wireless service

5   network is in communication with a music service provider, wherein the music service provider allows connections for remote clients. The method comprises connecting to the music service provider from a remote client, defining a play list at the music service provider through user interaction at the remote client, and connecting to the music service provider with the player over the wireless service

10   network. The method further comprises downloading music to the player from the music service provider in accordance with the previously defined play list, and playing the music at the player.

In one particular implementation, the music service provider is connected to the Internet. The music service provider is connected to the remote

15   client over the Internet. It is appreciated that a computer or similar device is used by the end user to predefine a play list at the music service provider. Thereafter, a portable wireless music player may download and play the music. The player is suitably made with sufficient functionality to select and play items off the predefined play list, but is kept sufficiently simple to keep costs of production low. Because the

20   content for playing is downloaded by the device, the device may have less memory than similar devices in which all content must be stored in the memory of the device (that is, devices that cannot communicate with the wireless network such as existing portable MP3 players).

The wireless service network may include a packet network such as

25   a virtual local area network. In accordance with a preferred embodiment of the present invention, the wireless service network includes a last leg in accordance with Internet protocol (IP). More preferably, the last leg is in accordance with dynamic host configuration protocol (DHCP). Most preferably, the connection between the music service provider, including a portion of the connection over the last leg,

30   includes a quality of service rating. In this way, the same network may be utilized for the portable wireless player that is utilized for other devices, such as the cellular

phone by giving the other devices a higher quality of service rating so that the portable wireless music player does not noticeably interfere with the other devices.

Further, in carrying out the present invention, a method of providing programming to a portable wireless player having a memory is provided. The player

5   is operative to transmit and receive information over a wireless link to a wireless service network. The wireless service network is in communication with a service provider. The service provider allows connections from remote clients. The method comprises connecting to the service provider from a remote client, and defining a play list at the service provider through user interaction at the remote client. The

10   method further comprises connecting to the service provider with the player over the wireless service network. The connection between the service provider and the player includes a quality of service rating wherein the wireless service network provides a plurality of services in addition to connections to the service provider. The plurality of services have different quality of service ratings. Further,

15   programming is downloaded to the player from the service provider in accordance with the previously defined play list, and the programming is played at the player.

Still further, in carrying out the present invention, a portable wireless player for use in playing programming received over a wireless link to a wireless service network is provided. The wireless service network is in communication with

20   a service provider that allows connections from a remote client. A remote client connects to the service provider and defines a play list at the service provider through user interaction at the remote client. The portable wireless player comprises a housing, a processor disposed in the housing, a memory disposed in the housing, a transmitter for transmitting information over the wireless service network, and a

25   receiver for receiving information over the wireless service network. The portable wireless player further comprises instructions in the memory that direct the processor to connect the service provider over the wireless service network, to download programming to the player in accordance with the previously defined play list, and to play the programming.

-3-

Still further, in carrying out the present invention, a portable wireless music player for use in playing music received over a wireless link to a wireless service network is provided. The wireless service network is in communication with the music service provider that allows connections from remote clients. A remote
5   client connects to the music service provider and defines a play list at the music service provider through user interaction at the remote client. The portable wireless player comprises a housing, a processor disposed in the housing, a memory disposed in the housing, a transmitter for transmitting information over the wireless service network, and a receiver for receiving information over the wireless service network.
10   The player further comprises instructions in the memory, a display for displaying the play list, and a plurality of control buttons for selecting music to play from the play list on the display. The instructions in the memory direct the processor to connect to the music service provider over the wireless service network, to download music to the player in accordance with the previously defined play list, and to play the
15   music.

The advantages associated with embodiments of the present invention are numerous. For example, methods and portable wireless players of the present invention provide a portable listening device that can retrieve and store and play, for example, MP3 (MPEG, Layer 3) user formats that are currently available on the
20   Internet via a transmission control protocol/Internet protocol (TCP/IP) wireless data network. Some of the players may also be provided with paging and voice messaging receiving capabilities. A preferred portable listening device has the ability to download files while playing current files for listening. The device communicates, in a suitable implementation, as a TCP/IP client in a wireless/land line data network
25   to a TCP/IP server, and the client device may support dynamic host configuration protocol (DHCP) to resolve static Internet protocol (IP) addressing issues. Providing a portable player with the ability to download from a predefined play list reduces the cost of buying flash memory which is used to store music and voice on current MP3 portable players because less memory is needed. Compulsive portable access to
30   listening material becomes available to the consumer. Being only a listing device that is not time critical, constant bandwidth allocation that is a concern in a voice network is not a concern for the portable wireless player. There is no need for an

expensive personal computer, personal digital assistant or cellular phone, but instead, a portable listing device with the present invention may be utilized. Embodiments of the present invention could bring back the days of the single hit phenomena that were at the beginning of rock and roll with the introduction of the 45 rpm records,

5   providing more opportunities for a wider range of artists and e-commerce. Optionally, the devices could also receive short messages and access voice mail.

The above object and other objects, features, and advantages of the present invention are readily apparent from the following detailed description of the best mode for carrying out the invention when taken in connection with the

10   accompanying drawings.

BRIEF DESCRIPTION OF DRAWINGS

FIGURE 1 is a network diagram illustrating the communications with the music service provider and with the portable wireless player;

FIGURE 2 is an enlarged view of a suitable implementation of the

15   portable wireless player;

FIGURE 3 is a block diagram illustrating the portable wireless player; and

FIGURE 4 is a block diagram illustrating a method of the present invention.

20   **BEST MODE FOR CARRYING OUT THE INVENTION**

Referring to Figure 1, the overall networking environment for embodiments of the present invention is generally indicated at 10. A music service provider 12 is connected to a data base 14 storing the play lists for the various users of the portable wireless music players. It is appreciated that the play list includes

25   information as defined by the particular user so that the wireless device may be a

simple device with limited functionality, and have a reduced cost. That is, it is desirable to keep the cost of the wireless device very low so that the devices are almost "throw-away" devices, similar to existing portable radio devices that have become extremely low cost in recent years. This is advantageous over existing and

5   quite expensive, portable MP3 players. To define the information in the play list, for a particular user, the user connects to the music service provider 12 from a remote client. It is appreciated that the user may connect to the music service provider 12 in a number of ways, with one of these ways being by connecting over the Internet 16. As shown, a user connects from a computer 20 through an Internet

10   service provider 18, over the Internet 16, to music service provider 12. Of course, alternatively, the user may access music service provider 12 in a different manner or over a different network 22. The user, from computer 20, defines the play list at music service provider 12 through user interaction at the remote client computer 20. Thereafter, the particular user has a predefined play list stored in database 14 of

15   music service provider 12. Thereafter, the portable wireless music player receives the predefined information from the play list and plays that information to the user. Preferably, embodiments of the present invention are implemented as music players such as an MP3 (MPEG, Layer 3) player. Of course, in the alternative, the predefined information in the play list may include additional information besides

20   MP3 music tracks, such as preselected news channels, or even any other types of audio channels. Although best suited for music, the true advantage of the present invention is in that the portable wireless device may be implemented in a low-cost manner with limited functionality because the information in a play list is predefined by the user during access from a remote client that is different than the portable

25   player, for example, a remote client computer connecting over the Internet.

Once the play list has been defined, the portable wireless player may connect to the music service provider to receive information over wireless service network 24. In a suitable implementation, wireless service network 24 includes a number of base stations 26. Base station 26 connects to a number of transmitters 28,

30   30, to communicate with portable wireless music players 32 and 34. Because the player is portable, it is preferred that a suitable technique is utilized to resolve addressing issues. In one implementation, a dynamic host control configuration

protocol server is implemented at base station 26 to dynamically assign Internet protocol addresses to portable wireless players when the player is turned on and logs onto the network. Of course, in the alternative, other addressing techniques may be utilized. In addition, it is preferred that the link between a portable device and the base station of the wireless service network 24 includes a quality of service rating. By utilizing a lower quality of service rating for the portable players than for other wireless devices, the network may be utilized for other devices with higher quality of service ratings such as cellular phones or personal digital assistance. A suitable wireless service network is a packet network such as a virtual local area network. The last leg of the network is preferably implemented as an Internet protocol network to allow the use of dynamic host configuration protocol (DHCP) for the server to resolve addressing issues. By utilizing quality of service ratings, the portable wireless devices may be implemented in such a way as to not interfere with other devices on the network. In particular, from time to time, the portable device downloads information in a burst, and for most of the time, the device is idle.

To complement the use of DHCP, a preferred embodiment of the present invention utilizes a wireless service network configured as a virtual local area network (VLAN). In turn, a portion of the network bandwidth would be allocated as a wireless local area network. Thin client wireless devices (the players) would connect to the local area network via a suitable protocol such as DHCP and VLAN. For the last leg of the network, transmission control protocol/Internet protocol (TCP/IP) over code division multiple access (CDMA) would be appropriate. Of course, other multiplexing techniques, such as time division multiplexing could also be appropriate. The network, preferably, is a true TCP/IP network with the last leg being mobile and wireless. The base station controller functionality to this network is a portable access device for CDMA and IP packets. In the alternative, the TCP/IP stack may be located away frm the remote client, with a portion of the last leg utilizing a proprietary protocol.

In Figure 2, an exemplary portable wireless player for use in playing programming received over a wireless link to a wireless service network is generally indicated at 40. The player plays information, such as music, that is predefined as

a play list at the service provider through user interaction at a remote client such as a computer connected to the Internet. The portable wireless player includes a housing 42, and a processor and memory disposed in the housing. An appropriate transmitter and receiver for transmitting and receiving information over the wireless

5   service network are also included within housing 42. As shown in Figure 2, the exemplary implementation of the device includes a suitable display 44 that shows the play list along with indicators 46 and 48 that indicate that more information is available than that shown in display 44 at the present time. Scroll buttons 50 and 52 may be used to scroll through the play list. Information is transmitted and received

10   with antenna 54. In the exemplary implementation, an on/off button 60 allows the user to turn the portable device on and off. In addition, play button 62 and stop button 64 are used to control the player. Scroll buttons 50 and 52 may serve as next track/previous track buttons to allow scrolling through different selections within the play list. As appreciated, the device may be equipped with a speaker, or in the

15   alternative, a line out jack 66 allows the connection of headphone 70 to the device. Further, in the alternative, a suitable adaptor such as a cassette deck adaptor may be connected to line out jack 66 to allow the device to be utilized within a vehicle. In addition, the device may be powered by batteries, and may optionally include direct current adaptor jack 68 and transformer 72 so that the device may be plugged into

20   a standard alternating current wall socket.

In Figure 3, a general implementation of the portable wireless player is generally indicated at 80. The player 80 includes processor 82, memory 84, speaker or line out 86, control buttons 88, transmitter 90, receiver 92, power source 94 (batteries, or direct current adaptor jack), and display 96. Memory 84 includes

25   instruction that direct the processor to connect to the service provider over the wireless service network, to download programs into the player in accordance with the previously defined play list which is downloaded at log-on, and to play the programming.

From a business standpoint, in a wireless data network, embodiments

30   of the present invention allow many customers to each pay a small monthly fee for limited service (the ability to predefine a play list and then receive that information

over a wireless link). This is advantageous over existing personal digital assistants that have a higher fee for a few customers that want numerous services. Further, the play list, in addition to including music tracks may include online radio and news stations and optionally could include paging/messaging capabilities. Commissions

5 could be derived from online radio stations, music vendors, and voice books.

It is appreciated that preferred implementations of the present invention utilize the portable player for playing music files received over the wireless service network. The device may play one file, while simultaneously receiving other

10 files over the wireless link. To keep the cost of the individual player down, limited memory may be used, and the player may have only enough memory to store a few songs. The amount of memory would determine the cost. The cheapest device would only have enough memory to hold a few seconds of sound. The player may then, after playing a song, clear that portion of memory for a new song to be

15 downloaded. That is, embodiments of the present invention may be implemented in a very cost effective manner because the amount of memory needed is much less than existing MP3 players that utilize lots of memory but do not have wireless link capabilities for downloading over a wireless service network. The existing devices must be connected to a computer and all music to be later played must be

20 downloaded to the device. The claimed invention allows the user to predefine the play list at the music service provider from a remote terminal such as a computer connected to the Internet, and subsequently, the player downloads and plays the music tracks (or radio stations or other online information).

It is appreciated that embodiments of the present invention have

25 various different implementations. For example, the files can be played or not played as they are downloaded. The screen could display the files that are in memory and the amount of play time for each file. A song may be replayed if desired. The buffersize of memory may depend on how much programming can be replayed on-demand. The amount of memory would determine the cost of the

30 device. The cheapest device would only have enough memory to hold a few seconds of sound. Not only the price but also the cost of use should be a consideration. The memory and processor consume battery life as experienced in the cell phone

industry. To lower the cost, ferroelectric nonvolatile random access memory and ferroelectric nonvolatile logic could be used. Or any other combination of memory devices could be used to keep the cost of use down and maximize the length of play. Different models could be made based on the customer preferences. Disk drives and

5   simcards, as they become minuturized, cheap, and have low power consumption, could also become an alternative to memory.

For example, the play list may include 50 or even 100 items, but the device will only have sufficient memory to store two or three tracks at a time. The low quality of service rating for the device relative to other devices used in the

10   wireless service network allows the portable players to be implemented without significantly negatively impacting the performance of existing devices in the wireless network. As shown in Figure 4, a method in a preferred embodiment of the present invention for a music player is generally indicated at 100. At block 102, the user connects with the music service provider from a remote client. At block 104, the

15   user defines the play list. At block 106, the user connects with the player over the wireless service network using DHCP and quality of service (QOS). Of course, other addressing schemes may be utilized in the alternative to DHCP and the TCP/IP stack may be at the device or away from the device as mentioned previously. At block 108, music is downloaded through the player when the music is on the

20   previously defined play list. Of course, the device is not limited to music. At block 110, the device plays the programming, which may be music, or an online radio station, or other online information.

While embodiments of the invention have been illustrated and described, it is not intended that these embodiments illustrate and describe all

25   possible forms of the invention. Rather, the words used in the specification are words of description rather than limitation, and it is understood that various changes may be made without departing from the spirit and scope of the invention.

WHAT IS CLAIMED IS:

1   1.   A method of providing programming to a portable wireless
2 music player having a memory and being operative to transmit and receive information
3 over a wireless link to a wireless service network, the wireless service network being
4 in communication with a music service provider wherein the music service provider
5 allows connections from remote clients, the method comprising:
6   connecting to the music service provider from a remote client;
7   defining a play list at the music service provider through user interaction
8 at the remote client;
9   connecting to the music service provider with the player over the
10 wireless service network;
11   downloading music to the player from the music service provider in
12 accordance with the previously defined play list; and
13   playing the music at the player.

1   2.   The method of claim 1 wherein the music service provider is
2 connected to the Internet, and wherein connecting to the music service provider from
3 the remote client further comprises connecting over the Internet.

1   3.   The method of claim 1 wherein the wireless service network
2 includes a packet network.

1   4.   The method of claim 1 wherein the wireless service network
2 includes a virtual local area network.

1   5.   The method of claim 1 wherein the wireless service network
2 includes a last leg, and wherein the last leg is in accordance with Internet protocol.

1   6.   The method of claim 5 wherein the last leg is in accordance with
2 dynamic host configuration protocol.

1   7.   The method of claim 6 wherein the connection between the

2   music service provider and the player, including a portion of the connection over the

3   last leg includes a quality of service rating.

1   8.   The method of claim 7 wherein the wireless service network is

2   for providing a plurality of services in addition to connections to the music service

3   provider, wherein the plurality of services have different quality of service ratings.

1   9.   A method of providing programming to a portable wireless

2   player having a memory and being operative to transmit and receive information over

3   a wireless link to a wireless service network, the wireless service network being in

4   communication with a service provider wherein the service provider allows

5   connections from remote clients, the method comprising:

6   connecting to the service provider from a remote client;

7   defining a play list at the service provider through user interaction at the

8   remote client;

9   connecting to the service provider with the player over the wireless

10   service network, the connection between the service provider and the player including

11   a quality of service rating wherein the wireless service network provides a plurality of

12   services in addition to connections to the service provider, and wherein the plurality

13   of services have different quality of service ratings;

14   downloading programming to the player from the service provider in

15   accordance with the previously defined play list; and

16   playing the programming at the player.

1   10.   The method of claim 9 wherein the service provider is connected

2   to the Internet, and wherein connecting to the service provider from the remote client

3   further comprises connecting over the Internet.

1   11.   The method of claim 9 wherein the wireless service network

2   includes a packet network.

1   12.   The method of claim 9 wherein the wireless service network

2 includes a virtual local area network.

1   13.   The method of claim 9 wherein the wireless service network

2 includes a last leg, and wherein the last leg is in accordance with Internet protocol.

1   14.   The method of claim 13 wherein the last leg is in accordance

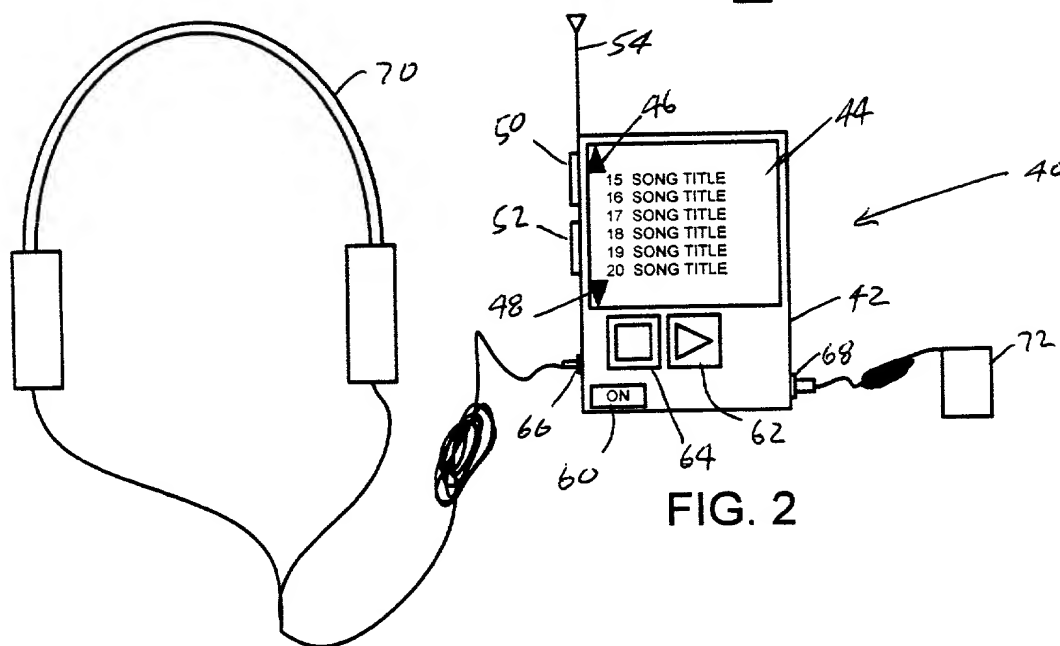2 with dynamic host configuration protocol.

1   15.   A portable wireless player for use in playing programming

2 received over a wireless link to a wireless service network, the wireless service

3 network being in communication with a service provider that allows connections from

4 remote clients wherein a remote client connects to the service provider and defines a

5 play list at the service provider through user interaction at the remote client, the

6 portable wireless player comprising:

7   a housing:

8   a processor disposed in the housing;

9   a memory disposed in the housing;

10   a transmitter for transmitting information over the wireless service

11 network;

12   a receiver for receiving information over the wireless service network;

13 and

14   instructions in the memory that direct the processor to connect to the

15 service provider over the wireless service network, to download programming to the

16 player in accordance with the previously defined play list, and to play the

17 programming.

1   16.   The player of claim 15 wherein the wireless service network

2 includes a last leg in accordance with Internet protocol, and wherein the instructions

3 further comprise:

4   instructions in the memory for connecting to the wireless service

5 network in accordance with Internet protocol.

1   17.   The player of claim 16 wherein the instructions further

2 comprise:

3   instructions in the memory for connecting to the wireless service

4 network in accordance with dynamic host configuration protocol.

1   18.   The player of claim 17 wherein the connection between the

2 music service provider and the player, including a portion of the connection over the

3 last leg includes a quality of service rating.

1   19.   The player of claim 18 wherein the wireless service network is

2 for providing a plurality of services in addition to connections to the music service

3 provider, wherein the plurality of services have different quality of service ratings.

1   20.   A portable wireless music player for use in playing music

2 received over a wireless link to a wireless service network, the wireless service

3 network being in communication with a music service provider that allows connections

4 from remote clients wherein a remote client connects to the music service provider and

5 defines a play list at the music service provider through user interaction at the remote

6 client, the portable wireless player comprising:

7   a housing:

8   a processor disposed in the housing;

9   a memory disposed in the housing;

10   a transmitter for transmitting information over the wireless service

11 network;

12   a receiver for receiving information over the wireless service network;

13   instructions in the memory that direct the processor to connect to the

14 music service provider over the wireless service network, to download music to the

15 player in accordance with the previously defined play list, and to play the music;

16   a display for displaying the play list; and

17   a plurality of control buttons for selecting music to play from the play

18 list on the display.

ABSTRACT OF THE DISCLOSURE

A method of providing programming to a portable wireless music player includes connecting to a music service provider from a remote client and defining a play list at the music service provider through user interaction at the

5   remote client. The player connects to the music service provider over a wireless service network and downloads music to the player from the music service provider in accordance with the previously defined play list. The music or other programming is played at the player.
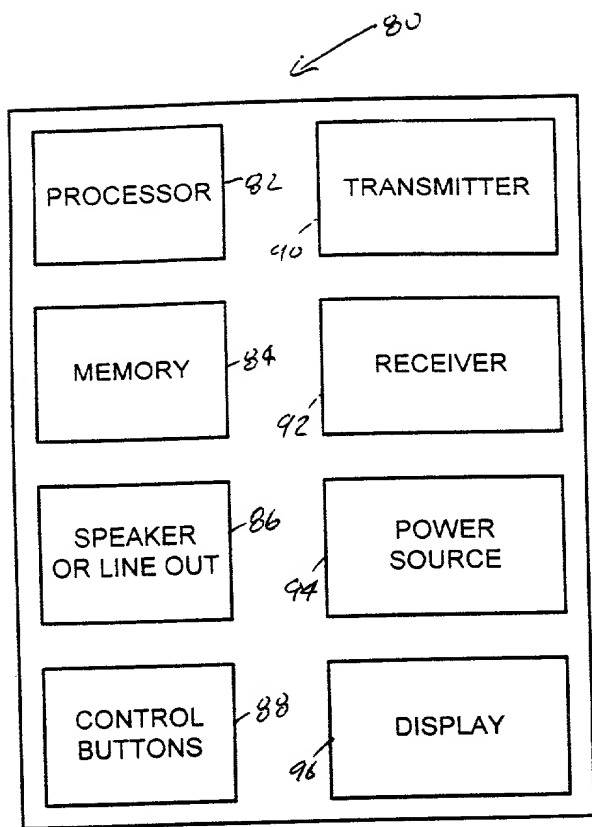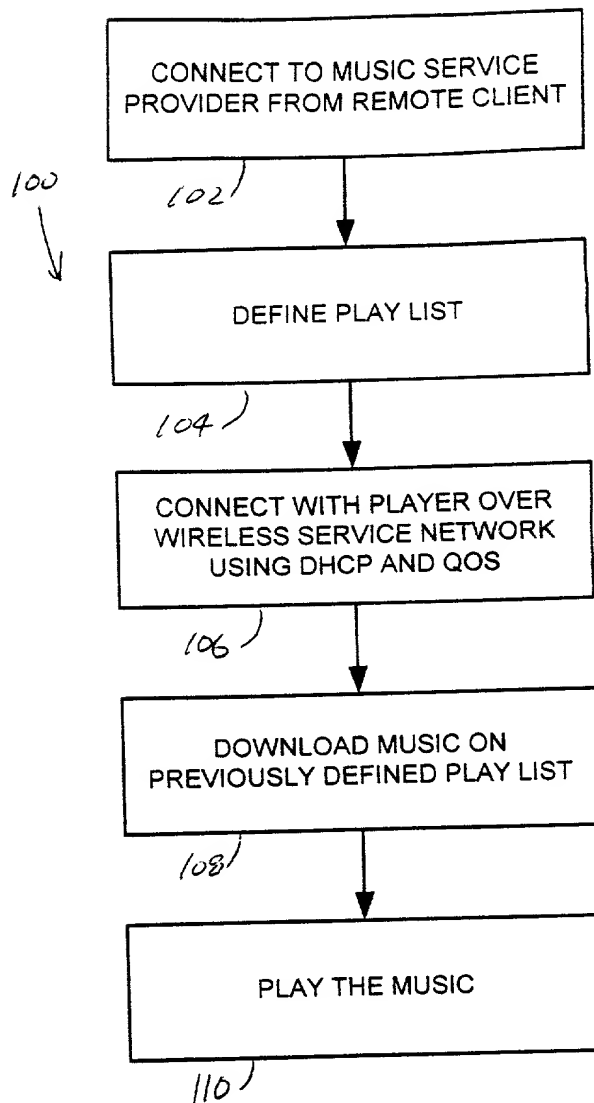
FIG. 1

FIG. 2

FIG. 3

PROCESSOR ~82

TRANSMITTER 90

MEMORY ~84

RECEIVER 92

SPEAKER OR LINE OUT ~86

POWER SOURCE 94

CONTROL BUTTONS ~88

DISPLAY 96

80

FIG. 4

CONNECT TO MUSIC SERVICE PROVIDER FROM REMOTE CLIENT

102

DEFINE PLAY LIST

104

CONNECT WITH PLAYER OVER WIRELESS SERVICE NETWORK USING DHCP AND QOS

106

DOWNLOAD MUSIC ON PREVIOUSLY DEFINED PLAY LIST

108

PLAY THE MUSIC

110

100

1724

DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

Atty. Docket No. __1724 (USW 0605 PUS)__

First Named Inventor __Warren E. Langdon__

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PORTABLE WIRELESS PLAYER AND ASSOCIATED METHOD,

the specification of which:
        [X]   is attached hereto; or
        [   ]   was filed on (MM/DD/YYYY) _____ as U.S. Application Number or PCT International Application Number _____, and was amended on (MM/DD/YYYY) _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below, and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Priority Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? (Yes/No)

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

Application Number(s)	Filing Date (MM/DD/YYYY)	Status: Patented, Pending, Abandoned

Declaration for Patent Application (cont'd.)

I hereby appoint the practitioners associated with Customer Number 22193 to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and direct that all correspondence be addressed to that Customer Number. Telephone calls should be directed to Qwest Communications International Inc., Law Department--Intellectual Property Group, at (877) 879-4747 or (303) 672-2700.

22193

PATENT TRADEMARK OFFICE

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Sole or First Inventor ___Warren E. Langdon___

Inventor's signature ___Warren E. Langdon___ Date __9-27-2000__

Post Office Address __3490 Catalpa Way, Boulder, Colorado 80305__

Residence __(same as above)__ Citizenship __United States of America__